

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

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## PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing (day/month/year)	20-09-2005
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Applicant's or agent's file reference

B2004001WO

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/IB2005/000737

International filing date (day/month/year)

22.03.2005

Priority date (day/month/year)

22.03.2004

International Patent Classification (IPC) or both national classification and IPC

G01L 5/04, B63B 27/30

Applicant

VETCO AIBEL AS et al

**1. This opinion contains indications relating to the following items:**

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability, citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

**2. FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further opinions, see Form PCT/ISA/220.

**3. For further details, see notes to Form PCT/ISA/220.**

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International application No.

PCT/IB2005/000737

Box No. I      Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of:
  - ☒ the international application in the language in which it was filed
  - ☐ a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  - b. format of material
    - ☐ on paper
    - ☐ in electronic form
  - c. time of filing/furnishing
    - ☐ contained in the international application as filed.
    - ☐ filed together with the international application in electronic form.
    - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/IB2005/000737

Box No. V Reasoned statement under Rule 43bis.1(a)(I) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-20	YES
	Claims		NO
Inventive step (IS)	Claims	1-20	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims		NO

2. Citations and explanations:

Documents cited in the International Search Report:

D1: US 4174628

D2: US 3722268

D3: GB 1241776

D4: US 3810081

The cited documents represent the general state of the art.

The invention defined in claims 1- 20 is not disclosed by any of these documents.

The cited prior art does not give any indication that would lead a person skilled in the art to the claimed method of monitoring and/or controlling a load on a slender, tensioned elongated element extending from a subsea wellhead element to a surface vessel where the bending moment and/or declination of the tensioned elongated element is estimated from measurements of the structural behaviour of the wellhead element or to the claimed device for monitoring and/or controlling a load on a slender, tensioned elongated element extending from a subsea wellhead element to a surface vessel having means for estimating the bending moment and/or declination of the tensioned elongated element upon measurements from means measuring the structural behaviour of the wellhead element. Therefore, the claimed invention is not obvious to a person skilled in the art.

Accordingly, the invention defined in claims 1- 20 is novel and is considered to involve an inventive step. The invention is industrially applicable.